

*Helix parramattensis* Cox, 1864: A Synonym of *Euconulus*  
(*Euconulus*) *fulvus* (Muller, 1774)  
(Pulmonata : Euconulidae)

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SUMMARY

A critical examination of the species *Turrisitala parramattensis* (Cox), an euconulid land snail found in the Sydney region of N.S.W., revealed that this species is identical with the holarctic species *Euconulus* (*E.*) *fulvus* (Muller). This discovery represents the first record of *E. fulvus* from New South Wales. The only previous record of *E. fulvus* from Australia was from the Cann River district, Victoria (Gabriel, 1928). A description and a figure of *E. fulvus* based on the New South Wales material are given.

INTRODUCTION

*Helix parramattensis* Cox (1864), was described from material collected by the Rev. R.L. King from Parramatta, near Sydney, N.S.W. In his monograph of the Australian land shells Cox (1868) placed the species in the section *Conulus*.

Iredale (1933) erected the genus *Turrisitala* with type *T. normalis* Iredale (= *Helix turriculata* Cox) for Australian species previously referred to the 'extra limital' genus *Sitala* H. Adams. *Turrisitala* was later restricted (Iredale, 1937) to include three east Australian species one of which was *Helix parramattensis*, while a number of new genera were created for the other Australian species of the 'Sitala' complex. These genera were included in a new family Durgellidae, later changed to Durgellinidae (Iredale, 1941). However it was clear (Iredale, 1942, pp. 33-34) that the position of many of the species in the family Durgellinidae still posed taxonomic problems. One of these surrounds the identity of the species *T. parramattensis* (Cox).

Examination of the syntypes (AM C.236, AM C.121529) of *T. parramattensis* revealed diagnostic characters not presented in the original description (Cox, 1864 p. 21) or Cox's later description with figure (Cox, 1868, p. 8; pl. VI, fig. 10). Cox (1868) refers to "an inconspicuous little conical shell, globose below, without any markings..." All specimens of *T. parramattensis* examined in the present investigation show well developed sculpture. Iredale (1942, p.34) mentions the presence of radial sculpture ("well marked striae") but in addition there is also a noticeable spiral sculpture particularly on the base. There is little doubt, that this poor definition of *T. parramattensis* has contributed to the confusion over its true identity.

Subsequent comparison of the syntype material with European and American specimens of *Euconulus fulvus* (Muller) in the collections of the Australian Museum, Sydney, and the Queensland Museum, showed that separation of Cox's species and *E. fulvus* is not warranted.

In view of the inadequate description by Cox, a diagnosis of *E. fulvus*, based on the N.S.W. material, is given below. Taylor (1914) and Pilsbry (1946) provide excellent descriptions of holarctic representatives of the species. Long (1972) provides additional information on the Australian introduction of the species in Victoria.

Material used in this study is housed in the Australian Museum, Sydney (AM).

## TAXONOMY

*Euconulus (Euconulus) fulvus* (Muller)  
(Figs. 1a, 1b, 1c)

*Helix fulva* Muller, 1774 (in part): 56.

*Helix parramattensis* Cox, 1864: 20.

*Helix (Conulus) parramattensis*. Cox, 1868: 8, pl. VI, Fig. 10.

*Hyalina (Euconulus) fulva*. Gabriel, 1928: 133.

*Turrisitala parramattensis*. Iredale, 1937: 11.

MATERIAL: New South Wales: Parramatta (Lectotype of *parramattensis*, AM C. 121529, Rev. R.L. King); Parramatta (Paralectotypes of *parramattensis*, 1 specimen plus fragment, AM C.236, Rev. R.L. King); Gerroa, under *Lantana*, (62 specimens plus fragments AM. C.119309, C. McLauchlan, 4 January, 1949); Clontarf; Port Jackson, under bricks and stones (1 specimen, AM C.119310, G.P. Whitley, 25 April, 1938); Glebe (7 specimens, AM C.119312, ex Cox); Ourimbah (1 specimen, AM C.119313, S.W. Jackson, December, 1905); Clifton scrubs, Wollongong (20 specimens plus fragments, AM C.119314, ex Lower, ex Cox); Clontarf, Port Jackson, amongst building stones, (23 specimens, AM C.119315, G.P. Whitley, May, 1938); Mulgoa Ck., nr. Glenorie (7 specimens, AM C.119316, ex Cox); Ryde (1 specimen, AM C.119317, ex Cox); Rose Bay (9 specimens, AM C.119318, ex Brazier).

## TYPE LOCALITY

Fridrichsdal, Denmark.

## DESCRIPTION

Shell small, thin, conic, semi-transparent, yellow horn colour, minutely perforate. Perforation sealed by a thin callous. Whorls 6, convex, regularly increasing, sutures impressed. Spire with radial striae, less crowded on the first two whorls, becoming more crowded on the later whorls, persisting just below the periphery of the body whorl. Base convex, shiny, with radial striae at the edge giving way to marked spiral striae towards the centre. Basal spiral striae crossed by irregularly spaced growth striae. Persistome thin, not reflected except at the columellar edge. Umbilicus small, almost three quarters covered by the columellar reflection. Aperture lunate. Dimensions (at 6 whorls): height 2.8mm; diameter 3.1mm.

## DISTRIBUTION

Holarctic (Pilsbry, 1946); Sydney region N.S.W. (introduced); Cann River, Victoria (introduced).

## HABITAT

The small amount of habitat data provided with the specimens examined, suggests that the species in Australia, occupies similar living space to the holarctic individuals.

## DISCUSSION

The Victorian introduction of *E. fulvus* was discussed by Gabriel (1928). Gabriel suggested that the species may have been introduced from Europe by way of packets of grain seed. The widespread occurrence of the species in the Sydney region adds little to the knowledge concerning its mode of origin. However, considering the presence of the many European introductions in the Sydney area, Europe seems the most likely centre from which *E. fulvus* was introduced.

The taxonomic confusion surrounding the identity of *E. fulvus* in Australia has parallels in the case of other introduced molluscs. *Zonitoides arboreus* (Say), was originally

described by Cox (1868) as *Helix lyndhurstensis*. Only later work (Bishop, 1978) showed the Australian species to be synonymous with the North American species. A similar situation existed with *Oxychilus cellarius*. In the case of *E. fulvus* the problem was exacerbated by the rather vague diagnosis of the species and the Gordian knot of taxonomic chaos surrounding the Australian "non-microcystid" euconulids. While Iredale (1942) remained perplexed the problems remain to be solved.

**ACKNOWLEDGEMENTS**

I would like to thank Dr. W.F. Ponder of the Australian Museum for making available the material for this study.

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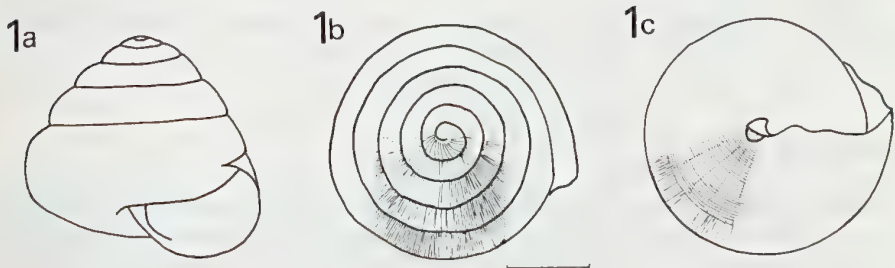


Figure 1a-c *Turrisitala parramattensis* (Cox, 1864)  
 Parramatta, N.S.W. Rev. R.L. King.  
 Lectotype. AM C.121529.  
 Scale line equals 1mm.